In the Claims:

1. In a packet radio communication system operable pursuant to an Internet Protocol (IP) and having a mobile host and a network part, the mobile host for communicating with at least a first correspondent host connected in communication connectivity with the network part,

5   an improvement of apparatus for facilitating communication of packet-formatted data by the mobile host in unfragmented form, said apparatus comprising:

a network-positioned determiner operable responsive to initiation of communications by the mobile host, said network-positioned determiner for determining, on behalf of the mobile host, of at least a first packet-size into which the packet-formatted data is

10   permitted to be formed for communication to the at least the first correspondent host, the at least the first packet size determined by said network-positioned determiner permitting communication of the packet formatted data in unfragmented form to the at least the first correspondent host.

15   2. The apparatus of claim 1 further comprising a notifier adapted to receive indications of determination of the at least the first packet size determiner by said network-positioned determiner, said notifier for notifying the mobile host of the at least the first packet size permitted of the packet-formatted data to the at least the first correspondent host.

20   3. The apparatus of claim 2 wherein the Internet Protocol pursuant to which the radio communication system operates further comprises an Internet Message Control Protocol (IMCP) and wherein said notifier notifies the mobile host of the at least the packet size permitted of the packet-formatted data with an Internet Message Control Protocol-formatted message.

4.   The apparatus of claim 3 wherein the Internet Protocol pursuant to which the

radio communication system operates comprises an IPng (Internet Protocol New Generation),

and wherein the Internet Message Control Protocol-formatted message by which said notifier

notifies the mobile host of the at least the first packet size permitted of the packet-formatted data

5   comprises an IMCPng (Internet Message Control Protocol New Generation)-formatted message.

5.   The apparatus of claim 4 wherein the at least the first correspondent host

comprises the first correspondent host and at least a second correspondent host, wherein said

network-positioned determiner determines the first packet size and at least a second packet size,

10   the second packet size indicative of how large that the packet-formatted data is permitted to be

formed for communication to the second correspondent host, indications of the first packet size

and the second packet size populating the IMCPng-formatted message.

6.   The apparatus of claim 4 wherein the at least the first correspondent host is

15   identified by at least a first packet address and wherein the IMCPng-formatted message further

comprises an indication of the at least the first packet address of the at least the first

correspondent host.

7.   The apparatus of claim 4 wherein the IMCPng-formatted message comprises a

20   Type Field and wherein the type field is populated with a selected value to indicate the IMCPng

message to contain the at least the first packet size.

8.   The apparatus of claim 1 wherein the at least the first correspondent host with

which the mobile node communicates comprises the first correspondent host and at least a

second correspondent host and wherein the at least the first packet-size determined by said

network-positioned determiner comprises the first packet size into which the packet-formatted

5   data is permitted to be formed for communication to the first correspondent host and at least the

second packet size into which the packet-formatted data is permitted to be formed for

communication to the at least the second correspondent host.

9.   The apparatus of claim 8 wherein the first correspondent host is accessible by way

10   of a first link during a selected interval, the first packet size determined by said network-based

determiner further associated with the first link during the selected interval, and wherein the

second correspondent host is accessible by way of a second link during the selected interval, the

second packet size determined by said network-based determiner further associated with the

second link during the selected interval.

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10.   The apparatus of claim 1 wherein said network-positioned determiner comprises a

Path Maximum Transmit Unit determiner, and wherein the at least the first packet size

determined by said Path Maximum Transmit Unit determiner comprises a first Path Maximum

Transmit Unit associated with a communication link extending to the first correspondent host.

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11.   The apparatus of claim 1 wherein the mobile host indicates communication by

generating a domain name server inquiry and wherein said network-positioned determiner

operates responsive to generation of the domain name server inquiry.

12.   The apparatus of claim 11 wherein the network part of the radio communication

system comprises a domain name server, wherein the domain name server inquiry generated by

the mobile host is routed to the domain name server and the domain name server generates a

response thereto, and wherein said network-positioned determiner is operable responsive to the

5   response generated by the domain name server.

13.   The apparatus of claim 1 wherein the network part of the radio communication

system comprises a packet data service node and wherein said network-positioned determiner is

embodied at the packet data service node.

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14.   The apparatus of claim 1 wherein the network part of the radio communication

system comprises a radio network portion and a packet data network portion, the radio network

portion and the packet data network portion interconnected by a connecting entity and wherein

said network-positioned determiner is embodied a the connecting entity.

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15.   The apparatus of claim 1 further comprising a cache for cacheing values

representative of the at least the at least the first packet size, the values cached thereat selectably

retrievable therefrom to notify the mobile host of the at least the first packet size.

16.   In a method for communicating in a packet radio communication system operable

pursuant to an Internet Protocol (IP) and having a mobile host and a network part, the mobile

host for communicating with at least a first correspondent host connected in communication

connectivity with the network part, an improvement of a method for facilitating communication

5   of packet-formatted data by the mobile host in unfragmented form, said method comprising:

determining at the network part, on behalf of the mobile host, at least a first

packet-size into which the packet formatted data is permitted to be formed for communication to

the at least the first correspondent host, the at least the first packet size permitting

communication of the packet formatted data in unfragmented form to the at least the first

10   correspondent host; and

notifying the mobile host of the at least the first packet size permitted of the

packet formatted data and determined during said operation of determining.

17.   The method of claim 16 wherein the Internet Protocol pursuant to which the

15   packet radio communication system is operable defines an Internet Message Control Protocol

and wherein said operation of notifying comprises sending an Internet Message Control

Protocol-formatted message to the mobile host.

18.   The method of claim 17 wherein said operation of determining comprises

20   performing a Discover Maximum Transmit Unit (MTU) procedure at the network part of the

radio communication system.

19.   The method of claim 18 further comprising the operation of cacheing the at least the first packet size determined pursuant to the Discover Maximum Transmit Unit procedure.

20.   The method of claim 16 further comprising the operation, prior to said operation of determining, of initiating communication by the mobile host, and wherein said operation of determining is performed responsive to initiation by the mobile host of the communication.